

## REMARKS

In the Office Action, claims 31-36 are rejected under 35 U.S.C. §103. More specifically, claims 31, 32, 35 and 36 are rejected over U.S. Patent No. 5,164,839 ("Lang") in view of U.S. Patent No. 5,475,498 ("Radice"), and claims 33 and 34 are rejected over Lang, Radice and further in view of U.S. Patent No. 5,432,769 ("Honjo"). Applicants believe that these rejections are improper based on at least the reasons set forth below.

Of the pending claims at issue, claim 1 is the sole independent claim. Claim 1 recites a data recording and reproducing apparatus. The data recording and reproducing apparatus includes a disc recording and reproducing means, a tape recording and reproducing means, a data transfer means, a first input/output means, and a second input/output means. The disc recording and reproducing means, the tape recording and reproducing means, the data transfer means, the first input/output means, and the second input/output means are integrally assembled.

The disc recording and reproducing means records audio-visual data, which comprises audio and visual data, audio data or visual data, transferred from the data transfer means in a disc recording medium to which random access is possible and reproduces the audio-visual data from the disc recording medium and outputs the same to the data transfer means. The tape recording and reproducing means records the audio-visual data transferred from the data transfer means in the tape recording medium and reproduces the audio-visual data from the tape recording medium and outputs the same to the data transfer means. The data transfer means transfers the audio-visual data among any of the elements selected from among the disc recording and reproducing means, the tape recording and reproducing means, the first input/output means, and the second input/output means.

The first input/output means receives an analog audio-visual signal from an outside apparatus, converts the same to audio-visual data of a digital format, and outputs the same to the data transfer means and converts the audio-visual data transferred from the data transfer means to an audio-visual signal of the analog format and outputs the same to an outside apparatus.

The second input/output means receives audio-visual data from a communication line connected to an outside apparatus and outputs the same to the data transfer means and outputs the audio-visual data transferred from the data transfer means to a communication line connected to an outside apparatus, wherein the data transfer means has an input buffering means performing the buffering of the audio-visual data input from the disc recording and reproducing

means, an output buffering means performing the buffering of the audio-visual data which is transferred to the disc recording and reproducing means, and a recording and reproduction control means controlling each of the reproduction operation and recording operation of the disc recording and reproducing means in accordance with respective remaining recording capacities of the input buffering means and the output buffering means.

As further supported in the specification, the data transfer means directs audio-visual data between the first input/output means, the second input/output means, the tape recording and reproducing means, and the disc recording and reproducing means. See, Specification, pg. 5, and Fig. 1. The transfer means transfers the audio/visual data in any direction among a disc recording and reproducing means, the tape recording and reproducing means, and the input/output means and at the same time adjusts the timing of input/output of the audio-visual data among them. See, Specification, pg. 5-6. Thus the data transfer means is a distinct and separate component of the data recording and reproducing apparatus.

The data transfer means includes selector circuits, a buffer control circuit, a recording buffer circuit, a reproduction buffer circuit, and a video processor circuit. See, Specification, pg. 31. The data transfer means allows control of the routing of the audio-visual data. See, Specification, pg. 31-32, and Fig. 3. In addition, the buffer control circuit of the data transfer means monitors the remaining recording capacity during recording and reproduction by the disc recording and reproduction means to prevent overflow. See, Specification, pg. 32. The video processor circuit of the data transfer means performs predetermined processing with respect to the data, such as signal level adjustment, superimpose processing, and character insertion processing. See, Specification, pg. 32-33. The video processor circuit of the data transfer means then outputs the resultant signal to the appropriate destination. See, Specification, pg. 33, and Fig. 3. The data transfer means is a specific distinct processing location in the system.

Thus, the components of the transfer means – the selector circuits, the buffering circuits, the buffer control circuit, and the video processor circuit - allow the data transfer means to provide operability and control over the data transfer of the claimed invention. See, Specification, pg. 31-32.

The use of means-plus-function language in the claim limitation “data transfer means” invokes 35 U.S.C. §112 ¶ 6. Thus this claim limitation must be interpreted to cover the corresponding structures in the specification and equivalents thereof. See, MPEP §2181. If the

specification defines what is meant by the limitation for the purposes of the claimed invention, the examiner should interpret the limitation as having that meaning. See, MPEP §2182. Therefore, the claim limitation "data transfer means" should be interpreted in view of the specification as previously discussed.

Applicants believe the cited art, even if combinable, is distinguishable from the claimed invention. For example, the primary Lang reference fails to provide a data recording and reproducing apparatus that includes a distinct data transfer means that includes selector circuits, buffering circuits, a buffer control circuit, and a video processor circuit. The Patent Office states that the data transfer means limitation is met by transfer elements which allow for transfer between various points/devices/inputs/outputs in Lang. See, Office Action, pg. 3.

Contrary to the Patent Office's position, the purported transfer means of Lang is merely a high speed data bus. See, Lang, col. 7, lines 20-25. In the claimed invention, the data transfer means as claimed is not just connecting circuits but is a separate and distinct component of the data recording and reproducing apparatus as discussed above. The data transfer means of the claimed invention is a specific processing location in the system, not just merely used for connecting circuits within the system. As previously discussed, the data transfer means processes the data and allows operability and control over processing and routing not obtained by the mere circuit transfer means in Lang. Therefore, Lang fails to recognize a data recording and reproducing apparatus that includes the data transfer means of the claimed invention, and thus, should be considered distinguishable on its own for at least these reasons.

Further, the Radice reference and the Honjo reference, alone or even if combinable, cannot be relied on solely to remedy the deficiencies of Lang. With respect to Radice, the Patent Office merely relies on this reference for its purported teaching of buffering circuits. See, Office Action, pg. 3. With respect to Honjo, the Patent Office merely relies on this reference for its purported teaching of controlling buffer capacity and stopping upon the predetermined capacity. See, Office Action, pg. 4-5. Therefore, even if combinable, Applicants do not believe that one skilled in the art would be inclined to modify the cited references to arrive at the claimed invention.

Based on at least these reasons, Applicants believe that the cited art is distinguishable from the claimed invention. Therefore, Applicants respectfully submit that the cited art, even if

combinable, fails to disclose or suggest the claimed invention, and thus fails to render obvious the claimed invention.

Accordingly, Applicants respectfully request that the obviousness rejections with respect to Claims 31-36 be withdrawn.

For the foregoing reasons, Applicants respectfully submit that the present application is in condition for allowance and earnestly solicit reconsideration of same.

Respectfully submitted,

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